

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	)	<b>MAIL STOP AF</b>
	)	
Kazuhiko Sugiyama et al.	)	Group Art Unit: 2616
	)	
Serial No.: 09/816,705	)	Examiner: D. Ryman
	)	
Filed: March 23, 2001	)	
	)	
For: INTERNET TELEPHONE SYSTEM	)	
ENSURING COMMUNICATION AND	)	
PATH SETTING METHOD	)	

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Sir:

**AFTER FINAL AMENDMENT**

In response to the Final Office Action dated August 10, 2006, and pursuant to 37 C.F.R.

1.116, the applicants propose amending the application as follows.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks** begin on page 8 of this paper.

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (currently amended) An Internet telephone system for voice communication between a telephone subscribing to a first voice network and a telephone subscribing to a second voice network via a network using an Internet protocol, comprising:

a plurality of label switch routers configured to use a label switching technique;

a first media gateway coupled to a first one of the plurality of label switch routers and a first signaling transfer point connected to said first voice network;

a second media gateway coupled to a second one of the plurality of label switch routers and a second signaling transfer point connected to said second voice network;

a path control unit configured to:

determine whether a first path having a first ~~bandwidth~~ band larger than a ~~bandwidth~~ band necessary for transferring a voice over Internet protocol (VoIP) packet between said first label switch router and said second label switch router exists, and

when it is determined that the first path having the first ~~bandwidth~~ band does not exist, set a new path having a ~~bandwidth~~ band that is equal to or more than double the ~~bandwidth~~ band necessary for transferring the VoIP packet; and

a packet control unit, coupled to said path control unit, configured to:

instruct said first media gateway and said second media gateway to transfer VoIP packets via the first path or the new path.

2. (currently amended) The Internet telephone system of claim 1, wherein the new path has a ~~bandwidth~~ band that is equal to or more than a hundred times the first ~~bandwidth~~ band.

3. (previously presented) The Internet telephone system of claim 1, further comprising:  
a route control unit configured to control said plurality of label switch routers.

4. (previously presented) The Internet telephone system of claim 3, wherein said route control unit is provided to each label switch router.

5. (previously presented) The Internet telephone system of claim 3, wherein said route control unit is connected to all of the plurality of label switch routers.

6. (currently amended) A path setting method of setting a path to which a ~~bandwidth~~ band is ensured on a network using an Internet protocol connected between a first voice network and a second voice network to execute voice communication between a telephone associated with the first voice network and a telephone associated with the second voice network, comprising:

determining whether a first path having a residual ~~bandwidth~~ band larger than a first ~~bandwidth~~ band necessary for transferring a voice over Internet protocol (VoIP) packet between two edge label switch routers exists; and

setting a new path having a ~~bandwidth~~ band that is equal to or more than double the first ~~bandwidth~~ band, when it is determined that the first path does not exist.

7. (currently amended) The path setting method of claim 6, wherein said new path has a ~~bandwidth~~ band that is equal to or more than a hundred times the first ~~bandwidth~~ band.

8. (currently amended) A call control apparatus for setting a path to which a ~~bandwidth~~ band is ensured on a network using an Internet protocol connected to a first voice network and a second voice network to execute voice communication between a telephone coupled to said first voice network and a telephone coupled to said second voice network, comprising:

a path control unit configured to:

determine whether a first path having a residual ~~bandwidth~~ band larger than a first ~~bandwidth~~ band necessary for transferring a voice over Internet protocol (VoIP) packet between a first label switch router and a second label switch router exists, and

when it is determined that the first path does not exist, set a second path having a ~~bandwidth~~ band that is equal to or more two times the first ~~bandwidth~~ band; and

a packet control unit configured to control a first media gateway and a second media gateway connected to said first and second label switch routers, respectively, to transfer said VoIP packet via the first path or said second path.

9. (currently amended) The call control apparatus of claim 8, wherein the second path set by said path control unit has a ~~bandwidth~~ band of a hundred times of said first ~~bandwidth~~ band.

10. (currently amended) A router connected between a first voice network and a second voice network to implement voice communication between a telephone associated with a first voice network and a telephone associated with a second voice network, comprising:

logic configured to set a path having a first ~~bandwidth~~ band that is at least two times a ~~bandwidth~~ band necessary for transferring a voice over Internet protocol (VoIP) packet in accordance with control by a call control apparatus, thereby establishing a plurality of connections in said path.

11. (currently amended) The router of claim 10, wherein said path has a ~~bandwidth~~ band of at least one hundred times the first ~~bandwidth~~ band.

12. (previously presented) The router of claim 10, wherein said router is a label switch router.

13. (currently amended) A computer program product for implementing a call control apparatus for setting a path between a first voice network and a second voice network, said computer program product comprising:

instructions for determining whether a first path having a ~~bandwidth~~ band larger than a ~~bandwidth~~ band necessary for transferring a voice over Internet protocol[.] (VoIP) packet between two label switch routers exists;

instructions for setting, when it is determined that the first path does not exist, a new path having a ~~bandwidth~~ band that is equal to or more than two times the first ~~bandwidth~~ band; and

instructions for controlling a media gateway connected to at least a first one of said two label switch routers to transfer said VoIP packet via the first path or said new path.

14. (currently amended) The computer program product of claim 13, wherein the new path has a ~~bandwidth~~ band that is one hundred times the first ~~bandwidth~~ band.

15. (currently amended) A device, comprising:

a controller configured to:

receive a call request associated with establishing a voice connection between a first device and a second device via a network, the voice connection using voice over Internet protocol (VoIP),

determine whether a first label switching path exists in the network between a first router and second router, the first router and second routers being involved in routing VoIP packets between the first device and second device, and

request, when the first label switching path does not exist, that the first router establish a second label switching path to the second router, the second label switching path having a ~~bandwidth~~ band of at least two times a ~~bandwidth~~ band needed for transferring a VoIP packet between the first and second devices.

16. (previously presented) The device of claim 15, wherein the controller is further configured to:

manage the use of labels associated with label switching in the network such that transfer of a VoIP packet from the first device to the second device through at least one other device uses a single label.

17. (previously presented) The device of claim 16, wherein each of the first and second devices comprises an edge router and the other device comprises a core router.

18. (new) The Internet telephone system of claim 1, wherein the path control unit is configured to store a maximum band settable between adjacent ones of the plurality of label switch routers.

19. (new) The Internet telephone system of claim 18, wherein the path control unit is further configured to store connection relationships between telephones in the first and second voice networks and the first and second media gateways.

20. (new) The Internet telephone system of claim 19, wherein the path control unit is further configured to store connection relationships between the first and second media gateways and the plurality of label switch routers.

**REMARKS**

Initially, the applicants note that the current Office Action reopened prosecution after the filing of an Appeal Brief. The current Office Action also provided a new grounds of rejection with respect to the pending claims. More particularly, the current Office Action rejected claims 1-17 under 35 U.S.C. § 112, first paragraph. The applicants note that this rejection was not necessitated by any amendments made to the claims in the previous response. The applicants therefore respectfully submit that the current Office Action has been improperly deemed a Final rejection. Accordingly, the applicants respectfully request withdrawal of the finality of the current Office Action and entry of the current amendment which addresses the new grounds of rejection.

Claims 1, 2, 6-11 and 13-15 have been amended to improve form and new claims 18-20 have been added. No new matter has been introduced. Claims 1-20 will be pending upon entry of this amendment.

Claims 1-17 have been rejected under 35 U.S.C. § 112, first paragraph. More particularly, the Final Office Action states that there is no support for the term “bandwidth” as used in the pending claims. While not concurring with the rejection, but to expedite prosecution, claims 1, 2, 6-11 and 13-15 have been amended to remove the term bandwidth and replace it with the term band.

The applicants further note that the Final Office Action states that the terms band and bandwidth refer to two distinct concepts and provides a definition for the term “band” as referring to a range of frequencies between two defined limits (Final Office Action – page 4). While the applicants agree that in some instances this definition of band may be appropriate, the applicants strongly assert that one of ordinary skill in the art would not apply such a definition to the term “band” as recited in the claims.



For example, the present application is related to voice data communications using an Internet protocol (IP) network. The present application is associated with, for example, setting paths between routers. One of ordinary skill in the art would recognize that setting paths between routers involves determinations with respect to bandwidth. Further, the present application also references a number of Internet Engineering Task Force (IETF) Request for Comments (RFCs), such as IET RFC 2205 and IETF RFC 2475 (see applicants' specification at page 14). These IETF RFCs refer to allocating bandwidth. Therefore, the applicants assert that although the term "bandwidth" is not explicitly used in the present specification, which applicants note is a translation of Japanese application number 84895/200, given the context of the present specification, one of ordinary skill in the art would understand that the term "band" as used in this application (including the claims) should be properly construed as meaning bandwidth. Nevertheless, claims 1, 2, 6-11 and 13-15 have been amended to remove the term bandwidth from the claims. Accordingly, withdrawal of the rejection of claims 1-17 is respectfully requested.

Claim 10 has been rejected under 35 U.S.C. § 102 (e) as being anticipated by Doshi et al. (U.S. Patent No. 6,529,499; hereinafter Doshi). The rejection is respectfully traversed.

The Final Office Action states that Doshi discloses a router that includes logic configured to set a path having a first bandwidth that is least two times a bandwidth necessary for transferring a VoIP packet in accordance with control by a call control apparatus and points to router 220 and virtual provisioning server 230 along with col. 4, line 65 to col. 5, line 6 for support (Final Office Action – page 4).

As discussed in the Appeal Brief previously filed, Doshi discloses that virtual provisioning server 230 determines capacity requirements over each path between IP network routers 220 (Doshi – col. 4, lines 32-35). Doshi also discloses that the capacity requirements for routers 220 are

virtually provisioned within available bandwidth capacity for delay sensitive traffic requirements (Doshi – col. 4, lines 36-40). Doshi at col. 4, line 65 to col. 5, line 6 discloses that virtual provisioning server 230 calculates the need for added capacity within IP network 205 to meet current and future bandwidth needs. This portion of Doshi further discloses that by centrally calculating and determining required network bandwidth, virtual provisioning server 230 determines the maximum number of voice calls that can be supported simultaneously between any pair of packet circuit gateways 215.

Doshi, however, does not disclose or suggest that router 220 includes logic to set a path having a first band that is at least two times a band necessary for transferring a VoIP packet in accordance with control by a call control apparatus, as required by claim 10. In contrast, Doshi merely discloses that provisioning server 230 provisions available bandwidth capacity for delay sensitive traffic and delay insensitive traffic and calculates the maximum number of voice calls that can be supported.

For at least these reasons, Doshi does not disclose or suggest each of the features of claim 10. Accordingly, withdrawal of the rejection and allowance of claim 10 are respectfully requested.

Claims 1-9 and 11-17 have been rejected under 35 U.S.C. § 103 as being unpatentable over Doshi. The rejection is respectfully traversed.

The Final Office Action admits that Doshi does not expressly disclose that when it is determined that the first path having the first bandwidth does not exist, that the virtual provisioning server 230 of Doshi sets a new path having a bandwidth that is equal to or more than double the bandwidth necessary for transferring the VoIP packet (Final Office Action – page 6). The Final Office Action, however, states that Doshi maintains a knowledge base of possible multiple paths between pairs of media gateways and that each path has a band that is sufficient to support multiple

connections and points to col. 4, line 65 to col. 5, line 6 for support (Final Office Action – page 6). The Final Office Action further states that “each path would have a band equal to or more than a double band of said necessary band” (Final Office Action – page 6).

As discussed previously, Doshi at col. 4, line 65 to col. 5, line 6 discloses that virtual provisioning server 230 calculates the need for added capacity within IP network 205 to meet current and future bandwidth needs. This portion of Doshi further discloses that by centrally calculating and determining required network bandwidth, virtual provisioning server 230 determines the maximum number of voice calls that can be supported simultaneously between any pair of packet circuit gateways 215. This portion of Doshi cannot be fairly construed to disclose or suggest that server 230 determines whether a first path having a first band between a first label switch router and a second label switch router exists and when it is determined that the first path having the first band does not exist, sets a new path having a band that is equal to or more than double the band necessary for transferring a VoIP packet, as required by claim 1.

That is, the mere fact that server 230 in Doshi calculates required network bandwidth provisioning cannot be fairly construed to disclose or suggest that server 230 sets a new path (when it is determined that the first path does not exist) having a band that is equal to or more than double the bandwidth necessary for transferring a VoIP packet, as required by claim 1. In contrast, virtual provisioning server 230 of Doshi merely provisions traffic over existing links. Nowhere in the portions of Doshi referenced in the Final Office Action, or elsewhere in Doshi, does Doshi disclose or suggest setting a new path when it is determined that a first path having a first band does not exist, much less that the new path has a band that is equal to or more than double the band necessary for transferring the VoIP packet, as required by claim 1.

For at least these reasons, Doshi does not disclose or suggest each of the features of claim 1. Accordingly, withdrawal of the rejection and allowance of claim 1 are respectfully requested.

Claims 2-5 are dependent on claim 1 and are believed to be allowable for at least the reasons claim 1 is allowable. In addition, these claims recite additional features not disclosed or suggested by Doshi.

For example, claim 2 recites that the new path has a band that is equal to or more than a hundred times the first band. The Final Office Action admits that Doshi does not disclose this feature, but states that Doshi discloses that each path can support multiple connections and points to col. 4, line 65 to col. 5, line 6 for support (Final Office Action – page 7). The Final Office Action further states that it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters of values of any system absent a showing of criticality and that the burden of showing criticality is on the applicant (Final Office Action – page 7). The applicants respectfully disagree.

Doshi, as discussed above, merely discloses that virtual provisioning server 230 determines the maximum number of voice calls that can be supported simultaneously between any pair of packet circuit gateways 215. Doshi does not disclose or suggest that a path control unit is configured to set a new path when a first path exists, much less that the new path has a band that is equal to or more than a hundred times the first band, as required by claim 2.

The applicants further submit that the bare assertion that the claimed feature is not critical to somehow shift the burden to the applicants is inappropriate. That is, the applicants assert that the Examiner has provided no objective motivation for modifying Doshi to include the feature recited in claim 2.

For at least these additional reasons, withdrawal of the rejection and allowance of claim 2 are respectfully requested.

Claims 6, 8, 13 and 15, as amended, recite features similar to, but not identical to claim 1. For reasons similar to those discussed above with respect to claim 1, withdrawal of the rejection and allowance of claims 6, 8, 13 and 15 are respectfully requested.

Claims 7, 9, 14, 16 and 17 variously depend on claims 6, 8, 13 and 15 and are believed to be allowable for at least the reasons their respective independent claims are allowable. Accordingly, withdrawal of the rejection and allowance of claims 7, 9, 14, 16 and 17 are respectfully requested.

Claims 11 and 12 depend on claim 10 and are believed to be allowable for at least the reasons claim 10 is allowable. Accordingly, withdrawal of the rejection and allowance of claims 11 and 12 are respectfully requested.

#### NEW CLAIMS

New claims 18-20 have been added. These claims include features not disclosed or suggested by the cited art. For example, claim 18 is dependent on claim 1 and recites that the path control unit is configured to store a maximum band settable between adjacent ones of the plurality of label switch routers. Claim 19 is dependent on claim 18 and recites that the path control unit is further configured to store connection relationships between telephones in the first and second voice networks and the first and second media gateways. Claim 20 is dependent on claim 19 and recites that the path control unit is further configured to store connection relationships between the first and second media gateways and the plurality of label switch routers.

The cited art does not disclose or suggest these features. Accordingly, allowance of claims 18-20 is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, the applicants respectfully request withdrawal of the outstanding rejections and time allowance of this application. In the event that the application is not allowed, the applicants respectfully request withdrawal of the finality of the current Office Action and entry of this amendment for the reasons discussed above.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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